CLINICAL APPLICATION POINTERS FOR NEURAGEN™ NERVE GUIDE

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Introduction:
NeuraGen™ Nerve Guide is an absorbable implant designed for the repair of peripheral nerve discontinuities. The recommendations and pointers below are based on my clinical experience with NeuraGen™ Nerve Guide over the past three years.

Achieving Hemostasis:
The purpose of the instructions below is to ensure that complete hemostasis of the nerve stumps has been achieved prior to insertion of the nerve ends into the NeuraGen™ Nerve Guide. The consequences of not achieving hemostasis will be the flow of fresh blood into the tube. The development of a blood clot inside the tube will prevent axonal regeneration.

• The nerve injury is visualized, and the distal and proximal stumps are resected in the normal fashion under tourniquet control. While resecting the stumps, any longitudinally orientated vessels may be cauterized, but cauterizing on the cut nerve face must be avoided.

• It is recommended that the tourniquet be let down before beginning the entubulation technique so as to ensure that complete hemostasis is achieved.

• The limb is elevated and light pressure is placed on the wound manually using wet gauze, and the tourniquet is then released, maintaining pressure for a couple of minutes. Remove the gauze and check for any bleeders, paying close attention to the perineurium and surrounding tissue.

Suture:
• Use a suture with an appropriate size for the nerve being repaired.

• 7-0 to 10-0 monofilament, non-resorbable suture is recommended.

• Ensure that air bubbles are eliminated from the lumen of the NeuraGen™ Nerve Guide by gentle flushing with sterile saline or lactated Ringer’s solution USP.

Use of Fibrin Glue:
• Fibrin glue can be used as an additional means of securing the nerve stumps but should not be used to replace the recommended sutures.

• Do not put fibrin glue inside the NeuraGen™ Nerve Guide, as it will impede the process of nerve healing and repair.

Immobilization:
• For entubulation repairs in the extremities, the associated joint must be immobilized for a period of approximately 3 weeks.

• Limited movement of the joint may occur under supervision at earlier times if there is an associated tendon repair.

NeuraGen™ Clinical Application Pointers prepared by Michel E.H. Boeckstyns M.D.
Entubulation Technique:

Determine Nerve Diameter and Achieve Hemostasis

First Suture

Second Suture

Final Saline Flush

Complete Repair